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INDUSTRIAL STATISTICS

World Programme of Industrial Statistics

Report of the Secretary-General

SUMMARY

The present document reviews the experience of the 1983 World Programme (paras. 6-23) and contains suggestions for the next World Programme (paras. 24-66). It is proposed that the present version of International Recommendations for Industrial Statistics be accepted as the framework for the next round of the World Programme and that international efforts for the next round be directed towards (a) special topics, taking into account both conceptual (paras. 34-48) and practical (paras. 49-59) issues, and (b) the need for technical co-operation (paras. 60-66).

Section I compares the outcome of the 1983 World Programme with that of the 1973 Programme (paras. 6-9) and examines the effectiveness of the 1983 Programme in achieving its goals (paras. 10-23).

Suggestions for the next World Programme, discussed in section II, include such topics as the role of the bench-mark industrial inquiry (paras. 35-37); the relationship between the industrial statistics programme and other important elements of an economic statistics programme (paras. 38-46); the minimum programme in industrial statistics (para. 47); possible links between establishment inquiries

* E/CN.3/1991/1 and Corr.1.

and labour force surveys (para. 48); and the preparation of practical guidelines for adapting national classification schemes to the new revision of ISIC and commodity classifications (paras. 50-51), for standardizing the collection of data on inputs and outputs (paras. 52-53) for constructing production indices and base weights (para. 54), for standardizing the dissemination of national data in an internationally comparable framework (paras. 55-57), for the use of sampling in industrial inquiries (para. 58) and for the possible creation, maintenance and use of business registers (para. 59). There follows a discussion of technical co-operation (paras. 60-65) and then a request that the Commission provide guidance on the relative importance of the various topics proposed (para. 66).

Section III (para. 67) provides points for discussion.

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INTRODUCTION

1. The 1983 World Programme of Industrial Statistics is the third in a series sponsored every 10 years by the Statistical Commission. The 1983 Programme, which was endorsed by the Commission at its twentieth session, in 1979, 1/ has now been completed.

2. The Statistical Commission, at its twenty-fifth session, in 1989, approved the inclusion of a report on the effectiveness of the 1983 World Programme of Industrial Statistics in the agenda of its twenty-sixth session. 2/ The Commission's Working Group on International Statistical Programmes and Co-ordination, at its thirteenth session, in 1989, welcomed the information provided by the Statistical Office of the United Nations Secretariat on preliminary considerations for the next World Programme of Industrial Statistics. The Working Group noted that the information would be circulated to the regional commissions, the United Nations Industrial Development Organization (UNIDO) and other organizations for comment. The Working Group requested that these and other relevant considerations be reflected in section II of the report of the Secretary-Gneral on the World Programme. 3/

3. Section I of the present report contains a review of the 1983 Programme in the context of its purposes, including a comparison of the outcome of the 1983 and 1973 Programmes, a description of the effectiveness of the Programme in encouraging bench-mark enumerations and a review of the impact of training workshops. In accordance with the request of the Working Group, section II outlines the suggestions for the next World Programme, reflecting the comments received from the regional commissions, UNIDO and other organizations.

I. REVIEW OF THE 1983 WORLD PROGRAMME OF INDUSTRIAL STATISTICS

4. The objectives of the 1983 World Programme, as set out in Recommendations for the 1983 World Programme of Industrial Statistics, Part One, General Statistical Objectives, 4/ are to encourage bench-mark inquiries and to guide national industrial census-taking.

5. To measure the achievement of the first objective, comparisons will be made between the establishment coverage of the most comprehensive industrial inquiries conducted in or near 1983 and 1973, as well as between the coverage of these inquiries and those from which data are published annually in volume I of the Industrial Statistics Yearbook. To measure the achievement of the second objective, country representation in the regional training workshops will be compared to national participation in the 1983 World Programme.

A. Participation in the 1973 and 1983 World Programmes

6. In table 1, national participation in the 1983 World Programme is compared with that of the 1973 World Programme, based on an inventory of countries represented in the publications containing the results of these Programmes. 5/ Although bench-mark inquiries are the internationally recommended goal, to measure "effectiveness" for the World Programme only in terms of the prevalence of bench-mark inquiries would be to ignore other positive developments. Therefore the yardstick adopted here for evaluating the World Programme is evidence of movement in the direction of greater comprehensiveness.

7. Each country or area has been classified as "participating" or "not participating" in the World Programmes according to whether or not it was able to provide more (published or unpublished) data on industrial activity than it supplies annually for publication in the Industrial Statistics Yearbook. Participating countries or areas have been further subdivided into those that reported data covering virtually all units, reflecting a bench-mark type of enumeration, and those for which the reported data did not reflect full coverage.

8. Table 1 shows a slight overall improvement in the level of country participation between 1973 and 1983. For 1983, 28 countries were able to provide data covering all units, compared with 24 in 1973. Of the 28 countries, 12 had not participated at all in the 1973 round, and 7 other countries had been unable to provide data on all units during the earlier period. Improvement in performance may also be noted in the fact that 10 countries that did not participate in the earlier round were represented in the 1983 round, although they did not provide data covering all units. Overall, a total of 66 countries participated in the 1983 Programme, compared with 54 countries in the 1973 Programme.

9. However, table 1 also shows a decline in the level of participation among 21 countries. Of these, 15 had apparently either abandoned or postponed the comprehensive inquiries that were carried out during the earlier period and the remaining 6 had abandoned or postponed their former inquiries covering larger establishments. Finally, all other countries showed the same status in the 1983 round of the World Programme as in the earlier one. Among these, 9 countries continued to conduct inquiries covering all units, 17 countries continued to conduct inquiries relating to the larger establishments only and 98 were not participants in either period.

Table 1. National participation a/ in the 1973 and 1983 World Programmes of Industrial Statistics

1973 World Programme	1983 World Programme: Countries participating: Total	With all units covered in the inquiry	Without full coverage in the inquiry	Countries not participating	All countries or areas
Countries participating	44	16	28	10	54
Of which:					
With all units covered	20	9	11	4	24
Without full coverage	24	7	17	6	30
Countries not participating	22	12	10	98	120
All countries or areas	66	28	38	108	174

a/ For a definition of "participating" and "not participating" countries or areas, see para. 7 of the present report.

B. Effectiveness of the 1983 World Programme in encouraging bench-mark enumerations

10. There are many factors influencing the decision of each national statistical office with regard to its industrial statistics programme. As suggested at the twentieth session of the Statistical Commission, the Statistical Office of the United Nations Secretariat, in 1982, conducted a survey to find out whether countries intended to carry out an industrial inquiry in association with the 1983 World Programme. 6/ The survey further requested that countries planning not to participate give the reason for their decision. The results of the survey are shown in table 2.

11. Of the 111 countries or areas that responded to the questionnaire, 24 indicated that they would not participate. Half of those countries attributed their decision to a lack of resources or to activities of higher priority; another 8 countries considered such a programme unnecessary because adequate means were already available for capturing needed information on their industrial activity.

12. Of the 87 countries that were planning to participate, only 49 actually produced data that could be said to conform in some way with the concept of the World Programme, in terms of establishment coverage or item content, or in the level of industrial detail according to which the data were reported. An additional 17 countries that had not indicated plans to participate produced similarly usable results, bringing to 66 the total number of countries that could be included in the forthcoming statistical publication based on the results of the 1983 World Programme.

13. The regional distribution of these countries is shown in table 3. As the table indicates, the regions and country groupings are not proportionately represented in the above country count. The percentage of countries represented ranges from 67 for the developed countries to 16 for countries of Africa. The corresponding figures for the other developing regions are 23 per cent for Western Asia, 39 per cent for Latin America and the Caribbean and 43 per cent for Asia and the Pacific, with an average of 30 per cent for all developing countries.

14. For certain applications of the industrial data involving regional aggregations or other country groupings, it is useful also to weight the calculation of country coverage in terms of the relative contribution of each country (or area) to industrial activity within the aggregation. Using as an indicator the gross domestic product (GDP) originating in industry for 1980 in current United States dollars for each country, the country coverage attained in association with the World Programme of Industrial Statistics accounts for 72 per cent of world GDP originating in industry, 75 per cent of GDP originating in industry for the developed countries and 61 per cent of the corresponding value for developing countries. Again, there is a wide range of coverage across the developing regions, varying from 97 per cent for Asia and the Pacific to 10 per cent for Africa. The corresponding figures for Western Asia and Latin America and the Caribbean are 14 and 75 per cent, respectively.

Table 2. National participation a/ in the 1983 World Programme of Industrial Statistics compared to the stated intention to participate

Reported intention with regard to the 1983 World Programme, as of 1982	1983 World Programme		
	Countries participating	Countries not participating	Total
Planning to participate	49	38	87
Planning not to participate	6	18	24
Of which, reasons:			
Lack of resources/activities of higher priority	3	9	12
Considered unnecessary; adequate means available	3	5	8
Other/no reason given	-	4	4
Did not reply to questionnaire on intention to participate	11	39	50
Did not receive questionnaire on intention to participate	-	13	13
Total	66	108	174

a/ For a definition of "participating" and "not participating" countries or areas, see para. 7 of the present report.

Table 3. Regional distribution of countries or areas participating a/ in the 1983 World Programme of Industrial Statistics

Region or country grouping	Total number of countries or areas	Number of participating countries or areas	Percentage of participating countries or areas within the region	
			Unweighted	Weighted b/
Developing countries	138	42	30	61
Africa	50	8	16	10
Latin America and the Caribbean	38	15	39	75
Asia and the Pacific	37	16	43	97
Western Asia	13	3	23	14
Developed countries	36	24	67	75
All countries or areas	174	66	38	72

a/ For a definition of "participating" and "not participating" countries or areas, see para. 7 of the present report.

b/ The sum of GDP originating in industry (1980, current United States dollars) of the participating countries or areas as a percentage of the same figure for all countries or areas in the country grouping.

15. Because of this variation, country participation in the World Programme should continue to be a major concern, especially in some of the developing regions.

16. In evaluating the effectiveness of the 1983 World Programme on the basis of establishment coverage, the following criterion is used: observed change in the direction of a bench-mark type of approach. This criterion would be consistent with the main function of the Programme set out by the Statistical Commission.

17. By definition, the term "bench-mark" implies something comprehensive. Theoretically, a bench-mark inquiry, taken infrequently, serves as a reference point for the more frequent but less comprehensive inquiries. In practice, however, it is not clear that the concept has taken hold widely within national statistical offices. Table 4 shows, for each participating country or area, the extent to which the establishment coverage of the inquiry on which the 1983 World Programme data are based differs from the coverage of the regular annual inquiries from which the data published in volume I of the Industrial Statistics Yearbook are generally derived.

Table 4. Coverage of the 1983 World Programme data compared to the coverage of data published annually in the Industrial Statistics Yearbook a/

Industrial Statistics Yearbook, 1987	1983 World Programme		
	All units covered	Without full coverage	Total
Same coverage	15	26	41
Greater coverage	-	4	4
Less coverage	12	1	13
Not currently published	3	5	8
Total	30	36	66

a/ The comparison is based on Industrial Statistics Yearbook, 1987, vol. I, General Industrial Statistics (United Nations publication, Sales No. E.89.XVII.13).

18. The table shows that in 41 of the 66 countries for which data are being published in association with the 1983 World Programme, the establishment coverage was the same as that used for the annual surveys. Fifteen of the 41 provided data covering all units annually. Presumably these are countries that have sufficient resources as well as a need for information to facilitate and justify the effort. The remaining 26 countries included in the 1983 World Programme publication qualified only because they provided data in greater detail than is normally requested by the Statistical Office of the United Nations Secretariat for the Industrial Statistics Yearbook. However, it is possible that in many of these countries the data are compiled annually anyway, so that only their submission to the Statistical Office would be infrequent.

19. Table 4 also shows that only 12 of the 66 countries are implementing the integrated industrial statistics programme as envisioned by the Statistical Commission, in which infrequent bench-mark inquiries into the structure of industry are supplemented by annual surveys of the larger establishments. This finding raises the fundamental question of whether or not a single formula for the World Programme of Industrial Statistics is appropriate in the present international statistical environment.

20. Finally, it should be mentioned that data were supplied to the Statistical Office in association with the World Programme by eight countries for which no data are currently published in the Industrial Statistics Yearbook. It is hoped that this marks the beginning of, or a return to, an industrial statistics programme in those countries.

C. Impact of training workshops

21. Regional training workshops on industrial census-taking and the conduct of bench-mark inquiries were held in three regions (Africa, Asia and the Pacific and Western Asia) under the direction of the regional commission concerned: at Addis Ababa, from 11 January to 13 February 1982, with the assistance of the Munich Centre for Advanced Training in Applied Statistics of the Federal Republic of Germany (the Munich Centre) and UNIDO; at Dakar, from 10 January to 4 February 1983, also with the assistance of the Munich Centre and UNIDO; at Suzhou, China, from 16 November to 11 December 1981, with the assistance of the International Statistical Programs Center of the United States Bureau of the Census; and at Kuwait City from 5 February to 9 March 1983, with the assistance of the Government of Kuwait and the Arab Institute for Training and Research in Statistics.

22. If it is difficult to attribute to the World Programme the observed final outputs, it is still more difficult to make attributions in connection with the guidance supplied to national statistical offices through the regional training workshops. Nevertheless, table 5 presents the only measure available, that is, a region-by-region comparison of the final outputs of countries represented by participants in the workshops.

23. The table shows that only 40 per cent of the countries which sent participants to workshops subsequently implemented an industrial inquiry conforming to the concept of the 1983 World Programme. Therefore, while the workshops may be credited with increasing international awareness of the concepts and definitions recommended for international comparability of industrial data, they have been less successful in fostering the implementation of integrated systems of industrial statistics. It will be very important for the next round of the World Programme to strengthen and expand modalities for supporting and encouraging national participation.

Table 5. National participation a/ in the 1983 World Programme of Industrial Statistics compared to participation in the regional training workshops

Regions where training workshops were held b/	1983 World Programme		
	Countries participating		
	With all units covered in the inquiry	Without full coverage in the inquiry	Countries not participating
Africa (31)	-	6	25
Asia and the Pacific (13)	6	6	1
Western Asia (4)	1	-	3
Total (48)	7	12	29

a/ For a definition of "participating" and "not participating" countries or areas, see para. 7 of the present report.

b/ Figures in parentheses indicate the number of countries or areas participating.

II. SUGGESTIONS FOR THE NEXT WORLD PROGRAMME

24. For the next round of the World Programme of Industrial Statistics, it is proposed that the highest priority be given to efforts that would directly strengthen the planning and implementation of industrial statistics programmes at the national level. A memorandum outlining proposed modes for carrying out this approach, as well as other relevant issues, was prepared by the Statistical Office of the United Nations Secretariat and circulated to the regional commissions, the specialized agencies and other international organizations in December 1989 for comment.

25. Comments and suggestions on the proposals of the Statistical Office were received from the Economic Commission for Europe (ECE), the Economic Commission for Latin America and the Caribbean (ECLAC), the Economic and Social Commission for Asia and the Pacific (ESCAP), the Economic and Social Commission for Western Asia (ESCWA), the International Labour Organisation (ILO), the International Monetary Fund (IMF), the United Nations Industrial Development Organization (UNIDO), the General Agreement on Tariffs and Trade (GATT) and the African Development Bank.

26. All organizations responded favourably to the special topics proposed by the Statistical Office and many suggested additional ones.

27. There follows a summary of the original proposals developed by the Statistical Office and of the comments and suggestions received.

28. Among the issues raised by the Statistical Office was the question of the reference year for the next World Programme. It was pointed out that, although the next round was already being referred to as the "1993 round", 1993 might not be the best year on which to focus. The World Programmes of Industrial Statistics began in 1963. At that time and earlier, the base years for production and employment indices ended in either 3 or 8. That pattern was changed when the base year was moved to 1970. From 1970 the base year was moved to 1975 and then to 1980, where it will probably remain until the change to 1990. In the mean time, the main reference year for the World Programme of Industrial Statistics continues to end in 3. While it is not desirable to have the base year and the World Programme reference year scheduled on different tracks, there may be no alternative. Moreover, from a practical point of view, it is most important that the timing of the World Programme not be allowed to impinge upon resources needed for other major enumerations, such as national population and housing censuses. In this connection it may be noted that, beginning with the 1980 World Population and Housing Census Programme, which ran from 1975 to 1984, the Statistical Commission switched the emphasis from recommending that countries carry out their population and housing census in years ending in 0 or 1 to recommending a census of fixed periodicity within each country.

29. Those respondents that commented on the question of the reference year for the next World Programme of Industrial Statistics recommended 1993 or a year close to it. Accordingly, in the light of all the above considerations, it is recommended that 1993 be the reference year for the next World Programme.

30. An emphasis on implementation at the national level for the next round of the World Programme of Industrial Statistics would require that high priority be assigned to specific practical issues to facilitate the development of industrial statistics programmes as well as a more comprehensive system of technical co-operation. Conceptual topics that have been growing in importance or otherwise changing in recent years would not be ignored, but they would of necessity be given a lower priority.

31. This approach would build upon past experience with the World Programme and channel resources in those directions that most closely reflected problems and needs at the national level. However, it should be noted that, although an extensive list of proposals and ideas is provided below, work in any of the areas proposed will be strictly contingent upon the availability of resources. The merits of the various proposals should therefore be considered in that context.

A. Substantive preparations

32. Previous rounds of the World Programme have been accompanied by a comprehensive review and revision of the international recommendations for industrial statistics. For the next round, however, if implementation is to receive the highest priority, it is proposed that the latest revision of the International Recommendations for Industrial Statistics, 7/ which was prepared after the documentation for the 1983 World Programme had been completed, 8/ be retained as the core document. Efforts and resources could then be directed towards reinforcing the basic elements of the integrated industrial statistics programme as currently defined.

33. This is not to suggest that important practical issues or necessary changes in the conceptual framework would be ignored. Rather, that the relevant documentation would consist of short working papers or monographs on specific topics, to be prepared directly for the consideration of national statistical offices and for use in the training workshops. At a later time, after review and revision of the working papers in the light of practical experience, they would be incorporated into a further revision of the international recommendations. The various topics that might be addressed through working papers are discussed below.

1. Conceptual issues

34. Even if the highest priority is given to the practical aspects of programme implementation, it is hoped that working papers on at least some of the conceptual issues can be prepared. The topics that might be considered include:

(a) The role of bench-mark inquiries in industrial statistics programmes;

(b) Alignment of industrial statistics concepts and definitions with those used in the system of national accounts;

(c) An extension of the statistics programme to include supplementary financial data;

(d) The pros and cons of conducting "economic" rather than "industrial" inquiries;

(e) The coverage of household and small-scale industry;

(f) Recommended definitions for environment-related data items to be collected through the industrial inquiry;

(g) Recommendations for a minimum programme on industrial statistics;

(h) Linking of industrial establishment surveys and labour force sample surveys in respect of employment statistics.

Each of these topics is reviewed below, along with the rationale for a proposed memorandum, where appropriate, in connection with the next World Programme.

(a) Role of the bench-mark industrial inquiry

35. The Statistical Commission's Working Group on International Statistical Programmes and Co-ordination, at its thirteenth session, requested that the relationship between bench-mark data collection provided by the World Programme and current collection of industrial statistics be reflected in the present report (see para. 2 above). This is a fundamental issue whose timeliness is evident from other directions as well. Bench-mark enumerations have been regarded as an important component of an industrial statistics programme because they (a) provide a complete profile of the structure of industry; (b) define the statistical universe from which samples may be drawn; in this regard they take the place of an up-to-date industrial register, which has met with little practical success; (c) supply a statistical basis for adjusting the coverage of annual data to full coverage for national accounts estimations or input-output tables, or to an internationally comparable standard, usually defined in terms of employment size; and (d) provide statistical information on certain important characteristics of industry which do not fluctuate sufficiently from year to year to warrant annual data collection. Examples include the installed capacity of power equipment in existing units and the detailed structure of inputs and outputs.

36. One of the surprising findings of the review of the effectiveness of the 1983 World Programme is the low rate at which national statistical offices have followed the international recommendations for an integrated industrial statistics programme, in which the infrequent (decennial) bench-mark enumerations are accompanied by annual surveys in the intervening years (see paras. 16-20 above and table 4). According to information currently available in the Statistical Office, less than 20 per cent of countries participating in the 1983 World Programme appear to have adopted the international recommendations in structuring their industrial statistics programme. Moreover, ESCWA, in its comments, reported that most of its member States had "opted, for various reasons, to undertake annual surveys on

industrial statistics without any bench-mark industrial census. This feature of the region will be taken into consideration in the substantive preparation of the regional seminar planned in 1993".

37. The observed low rate raises the question of how countries, in the absence of either an industrial register or a bench-mark enumeration, can accurately define their statistical universe for survey purposes. In view of the apparent lack of national concurrence with the international recommendations, it is proposed that the issue be reconsidered within the framework of the next World Programme. A proposed document on the role of bench-mark enumerations would take into account not only their main functions but also country practices in this regard.

(b) Industrial statistics and the national accounts

38. The international recommendations state that census value added as an intermediate concept "should remain the primary, and minimum, goal of all countries" and that the national accounts concept of value added, which is total value added, should be the "ultimate goal". 9/ The recommendations include general guidelines for measuring both concepts of value added as well as output and remuneration, and there is a case for retaining the census concept for analyses of industrial activity per se. However, the importance of the results of industrial inquiries for national accounts estimations is also recognized.

39. Although in principle both measurements should be available, in practice the situation is not so clear. The results of the 1983 World Programme show that only 22 of the 66 "participating" countries were able to supply information on receipts for non-industrial services rendered by industrial units and the cost of non-industrial services rendered to them. The next World Programme presents an opportunity to compare the elements of the two concepts, to review the differences in line with the revised System of National Accounts (SNA) and to encourage the reporting of data both ways.

(c) Financial data on industrial units

40. The proposed extension of the statistics programme to include supplementary financial data follows from a suggestion by the African Development Bank that "the data content should be expanded to provide up-to-date information ... required for the design, monitoring and follow-up of privatization policies that the multilateral and bilateral donor community has been recommending for the 1990 decade". It would include details on operating and non-operating income and expenditure as well as a balance sheet. This would take the industrial statistics programme beyond the establishment level to the enterprise, a change that may be entirely appropriate. A short memorandum on the subject accompanied by sample questionnaire modules is therefore proposed. The collection of financial data would also facilitate the cross-checking of certain information within the existing statistics programme.

41. The categories used to break down data on non-industrial activities, as costs to or secondary sources of revenue for industrial units, should be convertible to the major categories in which they are classified in the Central Product Classification (CPC). This would be in keeping with international efforts to standardize the treatment of services in data collection and to facilitate consistency in the reporting of statistics on non-industrial activity both within and outside the industrial sector.

(d) Economic versus industrial inquiries

42. The growing interest in services statistics also raises the question of what the scope of activities for the next World Programme should be. In a number of countries, the bench-mark inquiries have been defined as "economic" rather than "industrial" in scope. Most commonly included among the non-industrial activities are the "Wholesale and retail trade and restaurants and hotels" International Standard Classification of All Economic Activities (ISIC) (major division 6) and "Personal and household services" (ISIC division 95). With regard to statistical content, common ground between inquiries of the non-industrial and industrial units is limited. Although there may be some basis for a broader scope within the World Programme, at least for very general indicators such as the number of establishments, employment, wages and salaries, and turnover, practical concerns such as the consequent added burden on individual national statistical offices would have to be taken into account. Past recommendations for World Programmes have not formally endorsed an expansion in scope, leaving the matter rather to individual countries.

43. Although no change in this policy is proposed here, the development of practical guidelines for the creation and maintenance of business registers (see para. 59 below) could be a cost-effective beginning for bringing services into the international framework for economic statistics.

(e) Household and small-scale industry

44. It might be useful to review the relationship between the coverage of industrial inquiries and the collection of data on the very small units engaged in household or small-scale industrial activity. How should the household and small-scale industrial units be defined so that statistical coverage of them will form a non-overlapping continuum with the rest of the industrial sector? Unless this matter is resolved, it is possible that a portion of small-scale industry will be either unaccounted for or double-counted.

45. The forthcoming technical report on statistical programmes for household and small-scale industry should provide some perspective on the issue. The report also contains synopses of country practices for measuring small-scale industrial activity, as requested by ESCWA in its comments. To this might be added a memorandum calling for renewed attention to the issue and to the need for the active participation of industrial statisticians in dealing with it to ensure that the statistical requirements for purposes of planning and policy formulation involving household and small-scale industry are met.

(f) Environment statistics

46. As a statistical component of the United Nations commitment to programmes for sustainable development, the next round of the World Programme could serve as an important vehicle for the collection of standardized data on the relationship between industry and the environment. It is difficult to predict what data should be collected because present work in this area is still at an early stage. However, it is clear that the determination of the most appropriate data content should certainly be guided by statistical needs for an assessment of both the industrial origins of environmental damage and expenditures (capital and current) incurred for redress activities and environmental protection. A short paper on the subject is proposed, for dissemination to national statistical offices and for use in the training workshops.

(g) The minimum programme

47. ECLAC, in its comments, pointed out that there was a need for a minimum programme for the annual inquiries within the industrial statistics programme. Since its inception, the World Programme has referred to priorities for data collection, depending on the resource capacity of national statistical offices. The 1983 round also defined a "minimum programme", in which it was recommended that data be compiled only on the number of establishments, employment, wages and salaries, and the value of output. Moreover, the International Recommendations for Industrial Statistics 7/ suggest that, for countries developing an industrial statistics programme for the first time, this recommended bench-mark minimum programme might be considered also with respect to the annual inquiries. However, the description of the minimum programme in industrial statistics has been embedded in the documentation for the complete programme. It might be useful, therefore, to prepare a separate working paper containing only the information that is necessary to carry out the minimum programme.

(h) Industrial inquiries and labour force surveys

48. Among the responses received from the specialized agencies was the interesting suggestion from the International Monetary Fund that the next round might "address issues raised by the linking of establishment surveys and labour force sample surveys in respect of industrial employment statistics". Since the two types of surveys yield in part information on different dimensions of the same phenomenon, it would be desirable to examine ways in which they could be made more compatible. This would probably involve some concessions in methodology, but the potential benefits for manpower planning and policy formulation might justify the effort. Accordingly, a short paper on the subject is proposed for the next round of the World Programme.

2. Practical issues

49. The practical issues needing further development, which are discussed below, are:

(a) Change from revision 2 to revision 3 of ISIC;

(b) Links between currently used commodity codes, based on revision 2 of ISIC, and their equivalents in the various new commodity classifications, namely the Central Product Classification (CPC), the Standard International Trade Classification (SITC), Revisions 2 and 3, and the Harmonized System, for the international reporting of commodity production data;

(c) A master list of typical main raw materials, energy inputs and primary and secondary products and waste materials;

(d) Methods for revising production indices and base weights;

(e) A microcomputer template for international reporting of the bench-mark data associated with the World Programme;

(f) Sampling methods for industrial inquiries;

(g) Creation and maintenance of business registers and their use in industrial inquiries.

(a) Change from revision 2 to revision 3 of ISIC

50. Foremost among the practical concerns of many national statistical offices is the necessity of adapting their national classification schemes to the revised version of ISIC for the international reporting of industrial data. This work would probably be best co-ordinated within the context of the next World Programme because most countries will be faced with identical practical problems, for which common practical solutions can be devised. The Statistical Office has already completed tables of one-to-one correspondence between the two revisions. The only work remaining would be a short working paper to serve as a practical guide.

(b) Links between commodity codes in the various classifications

51. With the change to revision 3 of ISIC, the ISIC-based codes for commodity production data that were developed from revision 2 will become obsolete. Although none of the three new commodity classifications has an ISIC base, there would be little advantage in creating yet another commodity classification just to retain an ISIC-code connection. At the same time, there is no consensus on which of the new commodity classifications is to replace the present code. Therefore, it will be necessary to link the currently used codes to their equivalents in all the new classifications. This will be a major undertaking in terms of resource

requirements but it cannot be avoided. Every effort will be made to preserve the currently used definitions of commodities, so that continuity of the statistical time series can be maintained.

(c) Master commodity lists

52. Countries vary widely in the range of raw materials, energy inputs and primary and secondary products as well as waste materials associated with a particular industrial activity. These variations reflect differences in natural resource endowments, in the characteristics of the labour force as well as labour costs, and in the technological processes available. Nevertheless, it is possible to create an industry-specific master list of items, which countries could select from or modify according to local conditions. Construction of the master list for each industry, classified according to CPC, SITC and the Harmonized System, would help to standardize this kind of information and give some impetus to the collection of prices as well as quantity data.

53. Similarly, the listing of harmful effluents and air pollutants by industry would be an important first step towards statistically linking industrial activity to its environmental effects.

(d) Methodology for production and employment indices and base weights

54. While the theoretical basis for indices in general and the Laspeyres formula in particular has not changed since the publication of Index Numbers of Industrial Production in 1950, 10/ major revisions of the practical methodology for the construction of indices and their base weights are long overdue. Especially necessary are discussions of the practical aspects of preparing weighted coefficients for the production indices and the statistical treatment of new kinds of industries during the period between the base years. Several countries have requested this type of information and some shoring up in this area might be valuable in connection with the next round of the World Programme.

(e) Microcomputer template for bench-mark data reporting

55. The Statistical Office of the United Nations Secretariat receives a large body of international industrial data to be processed annually, much and increasing amounts of which are available at the national level in machine-readable form. However, because of a lack of uniformity in the standards for computerized data systems, the common link between national statistical offices and the Statistical Office of the United Nations Secretariat is in most cases a paper link. Printouts or completed United Nations paper questionnaires supplied by national statistical offices are forwarded to a United Nations keypunch unit for entry into the mainframe.

56. Efforts are being made to reduce the burden of this costly process by creating direct machine-readable links between national and international computer systems. Unfortunately, with regard to annual industrial data, national computer systems have advanced to the stage where the only reasonable option for the Statistical Office is to build software bridges individually to connect existing national systems with the United Nations industrial data bases. However, with regard to the decennial bench-mark data to be sought as an outcome of the next World Programme, a microcomputer template serving as a machine-readable questionnaire should simplify the transfer of these data to the Statistical Office of the United Nations Secretariat.

57. The proposed template would also include built-in editing routines that would allow much of the screening and correction of data to be carried out at the national level, where the supplementary information required is more readily available. The template would offer a further advantage in reinforcing the internationally recommended concepts and definitions.

(f) Sampling methods for industrial inquiries

58. Considering the importance of sampling techniques in linking bench-mark enumerations and the annual industrial surveys, this area needs much greater attention. It is proposed that the preparation of a working paper on the use of sampling in industrial inquiries be given high priority for the next round of the World Programme.

(g) Business registers and their use

59. Although all international recommendations for industrial statistics have stressed the importance of creating and maintaining a register of industrial establishments, there has been little information on methodology. Improvements in this area could be a major step forward, not only in strengthening the foundations for integrated industrial statistics programmes but also in enhancing the usefulness of all surveys of economic activities, including services. The next World Programme might give special attention to methods for the creation and/or maintenance of business registers, of which the industrial directory forms a part.

B. Technical co-operation

60. The technical co-operation programme for each developing region would consist of training workshops and a network of regional advisers in industrial statistics.

61. As a training aid for the workshops, the International Statistical Programs Center (ISPC) of the United States Bureau of the Census and UNIDO are developing the Industria Case Study, which will provide, for a fictitious developing country, a detailed example of the implementation of United Nations standards and recommendations for industrial statistics programmes.

62. It is hoped that the regional training workshops can be expanded to include participants not only from countries that have not yet fully established their industrial statistics programme but also from some countries where work in this area is more advanced. Of the 42 developing countries that participated in the 1983 World Programme, 23 were not represented at a regional training workshop. Among these countries, 2 were from Africa, 4 from Asia and the Pacific and 2 from Western Asia; 15 were from Latin America and the Caribbean, where no training workshop was held. There could be practical advantages in locating workshops in those countries where a well-developed industrial statistics programme is more than a theoretical possibility. There could also be important gains within regions through the sharing of experience among countries at various stages in the development of an industrial statistics programme.

63. The regional advisers would be responsible for assisting national statistical offices at all stages of their industrial inquiries, namely planning, enumeration and preparation of the final statistical reports. Their participation in the training workshops would be one element of that process.

64. Regional advisers would be instrumental not only in increasing the rate of national participation in the World Programme but also in more effectively adapting the international standards to local needs and conditions, thereby ensuring that the statistical results are both meaningful for each country and as close to international standards as practical. Furthermore, for some individual developing countries that may require additional resources in the form of training fellowships, equipment, consultancies and so forth, regional advisers could assist in the development of the necessary technical co-operation projects.

65. UNIDO has expressed interest in a technical co-operation programme, including its possible extension to provide a wide range of data to serve user needs in statistics on the environment, expenditure on research and development, depreciation costs and small-scale industrial activity.

66. The supplementary material and proposed technical co-operation described above should stimulate participation in the next round of the World Programme as well as encourage better international comparability of industrial data through standardization of the various elements that lend themselves to such treatment. However, none of the proposals is without resource implications; in some cases a major resource commitment is required. It would therefore be important to rank them according to their potential contribution to the growth and development of industrial statistics programmes in general as well as to the World Programme. The guidance of the Commission in this regard would be appreciated.

III. POINTS FOR DISCUSSION

67. The Commission may wish:

(a) To comment on the results of the 1983 World Programme, especially the limited country participation and its causes;

(b) To approve 1993 as the reference year for the next round of the World Programme;

(c) To consider the importance of bench-mark enumerations and of their links to the annual industrial inquiries;

(d) To comment on the relative merits of the various activities proposed for the next round of the World Programme;

(e) To single out some of the proposed components of the next World Programme as the most important;

(f) To suggest additional conceptual or practical topics that would be worthy of attention for the next round of the World Programme;

(g) To consider priorities for technical co-operation in connection with the next World Programme and methods of mobilizing the necessary resources for technical co-operation.

Notes

1/ Official Records of the Economic and Social Council, 1979, Supplement No. 3 (E/1979/23), para. 13.

2/ Ibid., 1989, Supplement No. 3 (E/1989/21), chap. I, sect. B, draft decision. The draft decision was adopted by the Economic and Social Council at its first regular session of 1989 (decision 1989/115).

3/ Report of the Working Group on International Statistical Programmes and Co-ordination on its thirteenth session (E/CN.3/1991/2), para. 33.

4/ Statistical Papers, Series M, No. 71 (Part I) (United Nations publication, Sales No. E.81.XVII.11), paras. 4 and 5.

5/ The publication containing the results of the 1983 Programme will be issued as The 1983 World Programme of Industrial Statistics: Principal Indicators and Related Data. The results of the 1973 Programme were published in The 1973 World Programme of Industrial Statistics: Summary of Data from Selected Countries (United Nations publication, Sales No. E.79.XVII.3).

6/ Official Records of the Economic and Social Council, 1979, Supplement No. 3 (E/1979/23), para. 12.

Notes (continued)

7/ Statistical Papers, Series M, No. 48, Rev.1 (United Nations publication, Sales No. E.83.XVII.8).

8/ Recommendations for the 1983 World Programme of Industrial Statistics, Statistical Papers, Series M, No. 71 (Parts I and II) (United Nations publications, Sales Nos. E.81.XVII.11 and E.81.XVII.12).

9/ International Recommendations for Industrial Statistics, Statistical Papers, Series M, No. 48, Rev.1 (United Nations publication, Sales No. E.83.XVII.8).

10/ Index Numbers of Industrial Production, Studies in Methods, Series F, No. 1 (United Nations publication, Sales No. 50.XVII.4).